Annual Report

Research and Major Equipment Grants

Individual Awards

1984 1985

The Ontario Mental Health Foundation

The Ontario Mental Health Foundation

Established by Special Act of Legislature of the Province of Ontario, 1960-61.

Members as at March 31, 1985

Donald Brooks, B.Comm., Chairman – Don Mills
Peter Lush, CPM – Vice-Chairman – Burlington
Charles Birkett, M.D. – Kettleby
Sidney Folb, Ph.D. – Toronto
Sidney Freedman, LL.B. – Toronto
John Hughes – Toronto
George Kerr, Q.C., M.P.P. – Burlington
Marlene Longdon, M.Sc.N. – Burlington
Abbyann Lynch, Ph.D. – Toronto
Joan Milling, M.A. – Toronto
Barry Morrison, B.A. – Mississauga
Howard Richardson, M.S. – Willowdale
Douglas Shields, C.A. – Richmond Hill
Wayne Squibb, B.A. – Toronto
Ann Van Fossen, M.A. – Mississauga
Donald Webster, B.Sc. – Toronto
Peter Wendling, LL. B. – Islington
Donald Zarfas, M.D. – London

Retirements in 1984:

Paul Black
Paul Douglas
John Ingle
James Reed
Mary Weaver
George Zaritzky

Personnel:

Dugal Campbell, Ph.D., Scientific Consultant
Margaret Clark, Executive Director
Louise Brown
Anita Macatangay
Jessie Paterson
Audrey Stefanovich

91-06609/

Chairman's Report

The research work done in Ontario funded in whole or in part by the Foundation is recognized world-wide for its quality and contribution. It is made possible by the funds we receive from the Government of Ontario supplemented by the generous donations of corporations and individuals.

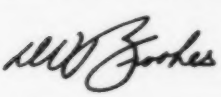
In our consumer and industrial society many of us seek fairly rapid gratification of our needs and returns on our investments. Yet this is not possible in scientific research. Final solutions are elusive and end results uncertain and require long term commitments.

We must remember that success in research is often the process of elimination that precedes and surrounds discovery. It is expensive and reliant on the persistent dedication of some of our country's best trained and most brilliant scientific investigators.

More than ever before there is a need to encourage interdisciplinary approaches to research and to create incentives for our scientists to remain in the research field.

Our goal is the elimination of at least some of the individual suffering and social cost caused by mental disease not only in Ontario but around the world. In pursuit of this I am grateful for the splendid contributions of the staff of the Foundation, the scientists and fellows, and the members of the Foundation and its advisory committees who have unstintingly worked to increase the money available for research and ensure the integrity of its use.

I also thank and express my sincere gratitude to those Foundation members who retired during 1984, and in particular, to Paul Black, our former chairman.



Donald V. Brookes, Chairman
June 1985

Scientific Activities

In 1984-85 the Foundation has continued to work to follow up the recommendations of its task force on new research objectives: the evaluation of mental health services delivered in community settings; epidemiology. In the case of epidemiology a working party is being formed to review the epidemiological data now available in the Province and to consider ways by which the data base for epidemiological studies can be improved. In the case of evaluation of community-based mental health services the Foundation has developed plans to hold a workshop in the Fall of 1985 at which it is hoped to show how evaluation research in this area can be done, at the agency level, with results that are both practical and scientifically sound.

The Foundation has followed with interest the work of the newly created Health Research and Development Council of Ontario. Of particular importance to the Foundation is the task force on mental health research appointed by Dr. H.G. Kelly, chairman of the Council, to advise about planning the use of Provincial resources for research efforts in the area of mental health. Taking part in the work of the task force will assist the Foundation in making policy and planning new initiatives which will both match the needs of the Province and take advantage of opportunities for scientific and clinical advance.

Foundation Programmes

As a statutory foundation, the OMHF receives most of its funds in the form of an annual grant from the Province of Ontario.

The Foundation offers 1) individual awards to those who wish to take up careers in mental health research, and 2) support for research projects undertaken by investigators who plan to do research in the field of mental health. Teaching in departments of psychiatry in the medical faculties of Ontario universities is supported by the Foundation, and there is also a limited programme of support for conferences and publications.

A complete listing of all research projects, major equipment grants, and individual awards funded by the Foundation in 1984-85 will be found on the following pages of the Report.

How to Apply for Grants

Copies of the Rules for Project Research, Individual Awards and application forms may be obtained from the research offices at universities in Ontario, or upon request from the Foundation.

John Dewan Prize

Dr. Paul Grof was chosen by the Foundation to receive the 1984-85 John Dewan Prize for his outstanding research contribution in the field of mental health.

A professor of psychiatry at McMaster University and Director of the Affective Disorders Unit at the Hamilton Psychiatric Hospital, Dr. Grof is best known for his research in the area of psychopharmacology and more recently in neuroendocrinology. His work on lithium in the treatment of affective disorders has earned him a world-wide reputation. The quality of his work is reflected in the leadership he gives to psychiatry, not only nationally but internationally in the field of lithium research. He has developed a wide range of innovative ideas on the clinical uses, toxic effects and prediction of responses to lithium in manic depressive illness.

The Ruth Schwartz Foundation

During 1984-85, a donation of $10,000. was received from the Ruth Schwartz Foundation.

Research which will provide new knowledge about what contributes to emotional disturbances in children is of particular interest to the Schwartz Foundation.

A study being conducted by Dr. Russell Schachar at the Hospital for Sick Children on "Attention Deficit Disorder (hyperkinetic syndrome) Attention Deficit, Parental Psychopathology and Environmental Adversity" is such a study.

We are very grateful to the Schwartz Foundation for their financial assistance with this project.

The Ontario Mental Health Foundation
Statement of Financial Activities
Operating Section
For the year ended March 31, 1985

	1985 $	1984 $
Revenue	**2,581,300**	2,451,200
Province of Ontario	**83,780**	62,995
Investment income	**2,665,080**	2,514,195
Expenditures		
Awards -		
Research grants	**1,435,064**	1,417,831
Major equipment	**70,790**	32,903
Research associateships	**348,588**	310,978
Research scholarships	**160,141**	157,455
Training awards	**—**	(1,900)
Fellowships -		
Long-term	**98,401**	74,235
Research	**55,399**	100,691
Research studentships	**47,269**	50,730
Educational associateships	**(1,145)**	50,353
Clinical research and development scientists	**66,150**	63,000
C.M. Hincks Lectures	**495**	17,138
Velleman Scholarship	**(350)**	24,058
Sundry grants	**—**	1,255
	2,280,802	2,298,727
Administration (including fee income of $16,435 (1984 - $14,700) for administration of the COMSOC lottery grants fund and depreciation expense of $3,558 net of $834 charged to Endowment Fund (1984 - $3,140))	**213,157**	184,082
Committee meetings expenses	**43,719**	42,400
	2,537,678	2,525,209
	127,402	(11,014)
Transfer from Endowment Fund (note 2)	**101,115**	—
Excess (deficiency) of revenue over expenditures for the year	**228,517**	(11,014)

The Ontario Mental Health Foundation Statement of Changes in Endowment Fund

For the year ended March 31, 1985

	1985 $	1984 $
Balance - beginning of year	**1,266,533**	1,081,341
Donations for the year	**78,218**	101,115
Investment income	**148,975**	131,606
	227,193	232,721
	1,493,726	1,314,062
John Dewan Award	**1,081**	2,052
Fund raising expenses	**14,750**	45,477
	15,831	47,529
	1,477,895	1,266,533
Transfer to Operating Section (note 2)	**101,115**	—
Balance - end of year	**1,376,780**	1,266,533

Statement of Changes in Lottery Fund

For the year ended March 31, 1985

	1985 $	1984 $
Balance - beginning of year	**230,509**	291,562
Investment income	**20,825**	18,465
	251,334	310,027
Awards expense - Research grants	**73,680**	79,518
Balance - end of year	**177,654**	230,509

Statement of Changes in COMSOC Lottery Grants Fund

For the year ended March 31, 1985

	1985 $	1984 $
Balance - beginning of year	**635,807**	713,476
Funds received from COMSOC for 1-3 year grants	**—**	511,000
Interest earned	**43,687**	84,505
	679,494	1,308,981
Research grants	**504,052**	658,474
Administration expense	**16,435**	14,700
	520,487	673,174
Balance - end of year	**159,007**	635,807

The Ontario Mental Health Foundation
Balance Sheet
as at March 31, 1985

Assets	1985 $	1984 $
Operating Section		
Current Assets		
Cash	**23,030**	8,563
Investments - at cost, which approximates market, plus accrued interest	**639,315**	508,792
Advances to grantees (note 5)	**182,455**	99,592
Unspent awards receivable (note 6)	**2,776**	15,008
Prepaid expenses	**991**	2,740
	848,567	634,695
Fixed Assets		
Furniture and fixtures - at cost	**57,761**	57,782
Accumulated depreciation	**28,351**	25,848
	29,410	31,934
Total assets - Operating Section	**877,977**	666,629
Endowment Fund		
Cash	**6,776**	1,330
Investments - at cost, which approximates market, plus accrued interest	**1,364,094**	1,258,859
Due from operating section	**6,910**	8,344
Total assets - Endowment Fund	**1,377,780**	1,268,533
Lottery Fund (note 3)		
Investments - at cost, which approximates market, plus accrued interest	**170,482**	188,205
Advances to grantees (note 5)	**11,822**	40,003
Unspent awards receivable note (6)	**5,100**	—
Due from Operating Section	**—**	3,801
Total assets - Lottery Fund	**187,404**	232,009
COMSOC Lottery Grants Fund - Held in Trust (note 4)		
Cash	**—**	25,158
Investments - at cost, which approximates market, plus accrued interest	**140,395**	581,347
Advances to grantees (note 5)	**28,831**	73,956
Unspent awards receivable (note 6)	**29,491**	1,807
Total assets - COMSOC Lottery Grants Fund	**198,717**	682,268
Total Assets	**2,641,878**	2,849,439

Signed on behalf of the board

Chairman

Vice-Chairman

Liabilities and Equity	1985 $	1984 $
Operating Section		
Current Liabilities		
Research and equipment grants, fellowships and associateships payable	**242,325**	258,196
Accounts payable and accrued liabilities	**12,891**	8,954
Due to Endowment Fund	**6,910**	8,344
Due to Lottery Fund	**—**	3,801
	262,126	279,295
Surplus - Operating Section		
Balance - beginning of year	**387,334**	398,348
Excess (deficiency) of revenue over expenditures for the year	**228,517**	(11,014)
Balance - end of year	**615,851**	387,334
Total liabilities and surplus - Operating Section	**877,977**	666,629
Endowment Fund		
Awards payable	**1,000**	2,000
Endowment Fund Balance	**1,376,780**	1,266,533
Total liabilities and equity - Endowment Fund	**1,377,780**	1,268,533
Lottery Fund (note 3)		
Awards payable	**9,750**	1,500
Lottery Fund Balance	**177,654**	230,509
Total liabilities and equity - Lottery Fund	**187,404**	232,009
COMSOC Lottery Grants Fund - Held in Trust (note 4)		
Bank overdraft	**294**	—
Grants payable	**39,416**	46,461
COMSOC Lottery Grants Fund balance	**159,007**	635,807
Total liabilities and equity - COMSOC Lottery Grants Fund	**198,717**	682,268
Total Liabilities and Equity	**2,641,878**	2,849,439

The Ontario Mental Health Foundation
Notes to Financial Statements
For the year ended March 31, 1985

1. Significant Accounting Policy
Fixed assets and depreciation

Fixed assets are recorded at cost less accumulated depreciation. Depreciation is calculated using the declining balance method at an annual rate of 10%.

2. Endowment Fund
Donations received are recorded in the endowment fund on a cash basis. Use of these funds is as directed by the members of the Foundation. Proceeds from donations received during the year, recorded in the Endowment Fund, are transferred to the Operating Section and made available for grants and awards in the following year at the discretion of the Directors.

3. Lottery Fund
The lottery fund represents a grant from the Provincial Lottery Awards made to the Foundation through the Ministry of Health, and is designated and fully committed for use to support the Anorexia Nervosa and Enriched Program on Alzheimer's Disease projects. The fund may not be used for other purposes.

4. COMSOC Lottery Grants Fund - Held in Trust
The Ministry of Community and Social Services (COMSOC) made funds available in previous years from its Lottery Grants Programme for the support of research related to Children's Services. During the year, The Ontario Mental Health Foundation continued to administer on-going research projects under this programme. These projects terminate March 31, 1986.

5. Advances to Grantees
Certain projects are approved for funding for more than one fiscal year. Advances to grantees represent unspent funds from the current year's award which are to be carried forward and added to the following year's award.

6. Unspent Awards Receivable
Unspent awards receivable represent unspent funds at the time a project ends. Grantees are required to return this money to the Foundation.

7. Award Commitments
The Foundation has made commitments of approximately $6,568,584 to fund projects over the next eight years as follows:

	$
1986	2,753,732
1987	1,646,670
1988	698,553
1989	514,447
1990	346,859
1991	250,926
1992	177,638
1993	179,759

8. Operating Lease
The minimum annual lease payments under an operating premises lease expiring in 1989 are $27,485 and in aggregate amount to $109,940.

The Ontario Mental Health Foundation
Schedule of Expenses
For the year ended March 31, 1985

	1985 $	1984 $
Administration		
Consultant's fees and expenses	**21,508**	12,144
Salaries	**110,958**	97,387
Rent	**26,568**	24,515
Foundation's share - Canada Pension Plan, employees' pension and unemployment insurance	**12,375**	10,902
Office supplies and expense	**31,637**	26,783
Audit	**2,700**	3,875
Telephone and telegraph	**3,641**	4,470
Depreciation - office furniture and fixtures	**3,558**	3,140
Sundry	**212**	866
	213,157	184,082

Auditors' Report to the Members

We have examined the balance sheet of The Ontario Mental Health Foundation as at March 31, 1985 and the statements of financial activities - operating section, changes in endowment fund, changes in lottery fund, and changes in COMSOC lottery grants fund for the year then ended. Our examination was made in accordance with generally accepted auditing standards, and accordingly included such tests and other procedures as we considered necessary in the circumstances.

In our opinion, these financial statements present fairly the financial position of the Foundation as at March 31, 1985 and the results of its operations for the year then ended in accordance with generally accepted accounting principles applied on a basis consistent with that of the preceding year.

Chartered Accountants
Toronto, Canada
June 26, 1985

Research Grants and Major Equipment Grants 1984-85

The Foundation received 95 new research grant applications and 18 applications for major equipment. Of this number 24 new grants and 4 major equipment requests were funded for a total of $957,295. In addition, 23 ongoing grants in the amount of $694,681. were supported.

Carleton University, Ottawa

Dr. H. Anisman **$30,237.**

Sensitization of catecholaminergic mechanisms by early life trauma: relationship to behavioral disturbances in adulthood.
An investigation in an animal model to find out if stress in early life produces "depression". The animals exposed to early stress are examined to establish if liability to depression is increased by an alteration in brain neurochemistry induced by early experience.

McMaster University, Hamilton

Dr. P. Chang **$54,859.**

Pseudosulfatase deficiency – mutations that escape neurodegeneration.
Dr. Chang is examining a neurodegenerative disease – metachromatic leukodystrophy. Her aim will be to develop a prenatal diagnostic test for this condition using monoclonal antibodies. Dr. Chang has discovered that some normal individuals carry the same genetic defect as affected individuals; her analysis is directed to establishing the difference between the groups who have the "pseudo" form of the disease and the clinical illness.

Drs. E.S. Garnett and G. Firnau **$4,330.**

To measure the distribution and concentration of the central dopaminergic receptors in normal man and patients with schizophrenic illness.
Dr. Garnett and his colleagues are developing a new instrument called the positron emission tomograph (PET) scanner. This machine shows the turnover of chemicals, and their location, in the brain. The machine can be used to test recent theories that mental disorders have a chemical basis.

Dr. D. Lamping **$19,084.**

Vulnerability to stress: temporal stability and cross-situational consistency.
This study compares individuals who have high and low vulnerabilities to induced and naturally occuring stresses. The aim is to generate "stress vulnerability" profiles which may be of use in designing individualized treatments for people exposed to stress.

Dr. P. Links, et al **$19,800.**

Studies in borderline patients: establishment of valid subgroups.
The accuracy of diagnosis is a recurring problem in psychiatric research. This study examines the accuracy of one diagnosis: "borderline patient". These patients do not fall into one of the established psychiatric categories and are discerned as having features peculiar to themselves. This study is intended to provide criteria to make the diagnosis certain.

Dr. L.P. Niles **$33,292.**

Melatonin and n-acetylserotonin receptors and pineal effects on brain and endocrine physiology.
Among brain chemicals manufactured by the pineal gland are some which alter in their concentration with the daily cycle of light and dark. This investigation looks at two of these substances – melatonin and n-acetylserotonin – which are thought to influence depressive illness.

Dr. J. Seggie **$35,338.**

Lithium and 24 hour rhythms.
This investigation examines the action of lithium – used for the treatment of manic-depressive illness. Manic-depressive disorders are influenced by circadian rhythms; this investigation aims to examine both behavioural changes and changes in the circadian output of brain hormones.

University of Ottawa

Drs. P. Hrdina and Y. Lapierre **$32,652.**

Studies on the site and mode of action of antidepressants.
These studies aim to find out the precise location in the brain where antidepressant drugs, used in the treatment of effective disorders have their effect.

Drs. P. Hrdina and Y. Lapierre **$33,017.**

Pharmacokinetics and clinical effects of 'second generation' antidepressants.
As new antidepressant drugs are developed some show a greater selectivity of action in the brain than others. This study tries to find out precisely where in the brain new-generation drugs have their greatest effect; and to show how they influence the symptoms for which they are prescribed as treatment.

Dr. D. Peters **$32,563.**

Prenatal stress: effects on brain development.
Dr. Peters is examining the proposition that stress, applied to a pregnant organism, can affect the adult behaviour of the offspring. He aims to develop tests of the biochemical abnormalities produced in the brain by stress to find out if such changes could explain abnormal conduct in the offspring of stressed mothers.

Queen's University, Kingston

Dr. J. Holden **$57,412.**

Identification of DNA markers closely linked to the mutation causing the fragile-X linked syndrome (a form of X-linked mental retardation). (including a Major Equipment Grant).
In recent years a mutation leading to mental retardation has been discovered called the "fragile X" chromosome. The aim of this investigation is to establish biological tests for this condition – to detect individuals at risk for mental retardation or who carry the defective chromosome and may transmit it to their children.

Dr. K. Jhamandas **$43,005.**

Evaluation of choline combinations in reversal of neurochemical and behavioural deficits associated with central cholinergic damage.
In senile dementia of Alzheimer's type a diminution in presynaptic cholinergic function is found in two areas of the brain – hippocampus and cortex. A possible treatment based upon this observation consists of supplying precursors of the missing substance. Dr. Jhamandas' work is designed to find out if the deficiency can be made good by supplying precursors.

University of Toronto

Dr. C. Bergeron **$72,299.**

Canadian brain tissue bank (including a Major Equipment Grant).
The study of brain tissue collected from patients who have had psychotic or organic diseases is of fundamental importance in establishing the physiological basis of the disease. This study is intended to support the development of the Canadian Brain Tissue Bank at the University of Toronto.

Dr. K. Blankstein **$6,586.**

Development and validation of a perceived physiological self-regulation scale.
A recent development in the treatment of patients with psychosomatic and neurotic disorders is the use of biofeedback. Dr. Blankstein is developing a test to detect which patients are more likely to benefit from biofeedback.

Dr. U. Deboni **$35,408.**

The brain cell nucleus in senile dementia and in model systems.
Recent studies of Alzheimer's disease suggest two different sources of dementia which marks this illness: an alteration in the chromatin found in brain cells; and an accumulation of the element aluminum. Dr. DeBoni is using cultures of cells in his laboratory to examine if aluminum produces alterations in the chromatin found in cells.

Dr. U. DeBoni **$25,000.**

Major equipment grant – inverted microscope.
This equipment is needed for the investigation of cellular changes in Alzheimer's disease.

Dr. C. Leprohon **$36,215.**

Biosynthesis of phosphatidylcholine from phosphatidylethanolamine in central nervous tissue: stimulation by catecholamines.
This study examines in detail how brain cells manufacture the substances which are used to transmit signals from one cell to another. There is disagreement about the way in which different classes of neurotransmitter substances are synthesized by brain cells; this investigation aims to find out the source of the chemical controls which direct manufacture.

Dr. B. Madras and P. Seeman **$51,777.**

Purification of brain dopamine receptors.
This study examines in detail the hypothesis that schizophrenia is due to a disorder of the dopaminergic system in particular regions of the brain. The objective is to provide a technique for detecting and purifying dopamine receptors – an essential part of a laboratory investigation.

Drs. D. McLachlan and P. Lewis **$85,206.**

Mechanisms of cell death in Alzheimer's disease.
This investigation is directed at changes which take place in the brains of individuals who suffer from Alzheimer's disease. It is possible that aluminum is the root cause of changes seen in brain cells; the experiment is designed to investigate how aluminum produces the pathological effects seen in the brain cells.

Dr. T. Petit **$68,645.**

Further studies of the neurobiology of Down's syndrome.
Dr. Petit has found abnormalities in brain development in patients suffering from Down's syndrome. Such alterations disrupt the normal brain function and may be the basis for the mental retardation; the studies aim to pin-point the time at which abnormal development begins.

Dr. M. Moscovitch **$39,510.**

A comparison of memory disorders in the aged and organic amnesics.
An investigation to distinguish between memory disorder in an established organic condition (Alzheimer's disease) and in healthy older people. Some forms of memory loss can be shown to be due to the circumstances in which elderly people find themselves; this hypothesis leads to a variety of remediation techniques which may benefit elderly patients.

Dr. P. Seeman **$44,327.**

Dopamine receptors in post-mortem schizophrenia tissues.
A leading theory put forward to explain schizophrenia is that patients have an abnormality in the activity of one neurotransmitter – dopamine. This study attempts to examine the hypothesis by examination of patients' brains post-mortem.

Dr. L. Spero **$33,391.**

The role of the specific 3H-phenytoin binding site and its endogenous peptide ligand in the etiology and treatment of epilepsy.
The effects of drugs used in the treatment of epilepsy are not well understood. This investigation is designed to lead to better information about the site of action of the drugs and also about the ways in which they alter brain activity.

University of Western Ontario, London

Dr. M. Ball **$53,165.**

Neuropathological lesions in Alzheimer's dementia: correlations with clinical and biochemical changes.
This investigation calls for clinical and psychological examination of patients with Alzheimer's disease and for study of the brain post-mortem. Precise measurement of the alterations in brain structure can be correlated with measured changes in function made before death.

Dr. C. Gibson **$21,025.**

Major equipment – Beckman J2-21M centrifuge with two rotors.
Dr. Gibson required this equipment to investigate the changes that take place in the brain tissue of individuals suffering from Alzheimer's disease.

Dr. C. Gibson **$38,903.**

Noradrenergic systems in aging and dementia.
Changes in particular parts of the brain are found in Alzheimer's disease. One part, the locus coeruleus, influences locomotion, learning, memory, mood and sleep. A study of biochemistry and cell structure in the locus coeruleus will be made on brain tissue from normals and Alzheimer patients.

Dr. D. Jackson **$32,900.**

Studies in the classification of psychopathology.
Dr. Jackson is developing a standard psychological assessment. He intends to provide an automated system of classification and diagnosis of psychiatric diseases.

Drs. R. Rylett and E. Colhoun **$12,670.**

Neurochemical and behavioural studies on cholinergic hypofunction induced in rats by choline mustard aziridinium ion: a possible animal model for Alzheimer's disease.
Dr. Rylett and Dr. Colhoun are investigating an animal model of Alzheimer's disease. Chemical treatment of the brains of rats may produce deterioration in those portions which operate by using one neurotransmitter acetylcholine. They are using this method to generate an animal model which mimics both the behavioural and pathological features of Alzheimer's disease.

University of Windsor

Dr. J. Cohen **$13,517.**

Effects of chronic and prenatal alcohol exposure on learning and memory in the rat.
This investigation will be carried out in animals to find out how pre-natal exposure to alcohol affects learning and memory; the experiment is an analogue of the fetal alcohol syndrome.

Mental Health Centre, Penetanguishene

Dr. V. Quinsey **$10,175.**

Studies in the assessment and treatment of sex offenders.
The misdirection of sexual activity, and its combination with violence is a persistent medico-legal problem. This study is designed to find out how the propensity to violence may be detected and, if treatment for it, given in prison, prevents the re-occurrence of offences.

Clarke Institute of Psychiatry, Toronto

Drs. R. Cooke and J. Warsh **$17,235.**

Hydroxylated metabolites of tricyclic antidepressants: clinical significance.
Tricyclic antidepressants are used to treat depression. This investigation is intended to find out more about the mode of action of these drugs.

Dr. J. Jeffries **$25,417.**

Focal family therapy with families of schizophrenic non-responders: an outcome study.
Recent research suggests that the family has an impact on the course of illness in the schizophrenic patient. It is not clear how the family exacerbates or alleviates symptoms. This study is designed to find out if psycho-therapy which involves the family improves the course of patients discharged from hosptial.

Dr. S. Kish **$6,050.**

Brain glutathione metabolizing enzymes in dementia conditions.
Neurochemical and neuropathological changes in the brain have been described in patients with dementia (Alzheimer type and Parkinson's disease). Dr. Kish is examining the evidence for the hypothesis that the changes are due to a reduction of activity of two particular brain enzymes: glutathione peroxidase; glutathione reductase.

Dr. M. Konstantareas **$43,009.**

Early development backgrounds, cognitive, socioaffective, linguistic and behavioural characteristics of autistic and retarded children: possible interrelationships.
Little is known about the factors leading to childhood autism. This descriptive study examines a large number of possible causative factors: the individual, family background, cognitive abilities, linguistic abilities – in order to find out how they may lead to manifestation of the disease.

Hospital for Sick Children, Toronto

Dr. M. Dennis **$2,650.**

The effects of congenital, infantile, and postinfantile brain damage on subsequent intelligence.
Damage to the developing brain can occur in the womb, at birth, or during childhood. Such early damage may cause an impairment of intelligence. Dr. Dennis is trying to find out what types of damage place the child at risk.

Drs. S. Goldberg and C. Corter **$48,264.**

Social competence and behavior in low birth-weight twins and singletons.
Low-birth-weight infants are at risk for behaviour disorder because they may suffer undetected brain damage because the birth, hospital stay and subsequent care is difficult. There is little data on behaviour problems in such children. This study will assess these domains as the children reach four years of age.

Drs. S. Goldberg and K. Minde **$17,032.**

Parental reactions to death and illness of newborns.
The death of a newly born child may place parents at risk for subsequent psychiatric disturbance and can influence the development of children born later. Dr. Goldberg is carrying out a prospective study of those whose child died in early life to find out if the death and social support alter the ability of the family to withstand stress.

Drs. K. Minde and R. Bates **$45,811.**

Development of aggression in preschoolers and its relation to socialization.
Aggression in children is a problem which troubles parents and school teachers. Little is known about the development of aggression. This study aims to find out if aggression is a consistent feature of an individual.

Dr. C. Netley and J. Rovet **$44,793.**

The X chromosome: temperamental, intellectual and biological correlates.
It is known that some children have unusual numbers of X or Y chromosomes. Much of the research concerning children with these abnormalities has been directed to physical growth rather than to intellectual and personality development; this investigation will fill a gap in our knowledge.

Dr. R. Schachar **$48,292.**

Attention deficit disorder (hyperkinectic syndrome) attention deficit, parental psychopathology and environmental adversity.
This investigation of hyperactive children will look at: attention disorder in child patients; the presence of psychopathology in their family; the environmental adversity faced by the family. The aim of the investigation is to examine the interaction between the child, the parents' conduct and the family situation.

Toronto General Hospital

Dr. P. Garfinkel, et al **$56,027.**

Anorexia nervosa: factors related to its diagnosis and outcome.
Anorexia nervosa is a condition most commonly found amongst young women. Dr. Garfinkel is investigating the factors which predispose individuals to this illness and ways in which it may be treated. He is examining the prevalence of the condition overseas and in Canada to assess social factors in this disease.

Dr. G. Rodin **$19,912.**

Renal transplant failure: the medical and psychosocial consequences.
The study investigates what happens to the psychological and social state of a patient in whom a kidney transplant fails. It will give information about the consequences of transplant failure and provide a way of assessing patients who are at risk for psychological and social morbidity due to failure of treatment.

Toronto Western Hospital

Dr. P. Carlen **$27,194.**

Altered sedative-hypnotic drug responses and excitable membrane properties of neurons from old compared to younger mature neurons.
As patients become older the efficacy of drugs alters. This study examines the effects of sedative and hypnotic drugs on older and younger neurons grown in a laboratory.

Mount Sinai Hospital, Toronto

Drs. J. Hallonquist and J. Brandes **$30,981.**

Effects of electroconvulsive shock on circadian rhythms in rodents: implications for affective disorders.
Dr. Hallonquist aims to elucidate the mechanism which underlines the outcome of electro-convulsive therapy. Depressive disorders produce alterations in biological rhythms; this investigation will show if electroconvulsive shock restores or disturbs biological rhythms in experimental animals.

Children's Psychiatric Research Institute, London

Drs. B. Gordon and M. Haust **$10,715.**

The Sanfilippo syndrome, delineating the pathology. Effects of the lysosomal enzyme defect at the plasma membrane and beyond.
This study is designed to find out what is the chemical basis behind one form of mental retardation known as the Sanfilippo syndrome. Examining the chemical changes is necessary in order to plan a proper therapeutic regime for these children.

University Hospital, London

Drs. A. Hudson and M. Silver **$41,372.**

Plasma membrane disorder and mental retardation in myotonic dystrophys.
Myotonic dystrophy is the most common of the muscular dystrophys; mental retardation is associated with it when the disease occurs in early life. This investigation is aimed at early detection of the disease and the development of improved care for those carrying the physiological abnormality.

Hamilton Psychiatric Hospital

Drs. D. MacCrimmon and R. Jones **$30,753.**

Carbamazepine therapy and procaine activated, computer analysed EEG in treatment resistant schizophrenic psychoses.
Some schizophrenic patients, who do not respond successfully to ordinary treatment, may respond to anti-epileptic medication. This investigation is designed to find out if these patients can be detected by a specialised form of EEG examination.

North Bay Psychiatric Hospital

Drs. M. Dongier and D. Cooper **$36,620.**

Screening alcoholics in a psychiatric hospital
The prevalence of alcoholism in patients admitted to psychiatric hospitals is probably underestimated. Patients admitted to a psychiatric hospital will be screened by both biological and questionnaire techniques to find out how often psychiatric patients have a problem related to alcohol use.

Ottawa General Hospital

Drs. R. Pivik and A. Jones **$23,541.**

Visual-vestibular interactions in psychosis.
In a number of psychotic patients there are interactions between the visual and the vestibular systems. These lead to alterations in patients' ability to fix their gaze on a target when the head moves, to track a moving object and the like. Dr. Pivik will try to find out how this dysfunction is exhibited and how it is related to psychotic illness.

Individual awards 1984-85

In 1984-85, 42 Individual Award Applications were received. Of this number 9 were supported for a total of $188,738.

In addition, the Foundation supported 18 ongoing Individual Awards in the amount of $586,968.

Carleton University, Ottawa

Research Student	Mr. B. Bialik

McMaster University, Hamilton

Research Associates	Dr. G. Brown Dr. D.Campbell Dr. J. Seggie
Research Scholars	Dr. P. Chang Dr. R. Mishra Dr. M. Pisa
Clinical Research and Development Scientist	Dr. J. Cleghorn
Long-Term Fellows	Dr. E. Grof Dr. L. Niles Dr. E. Werstiuk
Research Student	Mr. J. Ramwani

University of Ottawa

Research Associates	Dr. R. Pivik
Long-Term Fellow	Dr. D. Clapin

Queen's University, Kingston

Research Associate	Dr. D. Soudek

University of Toronto

Research Associates	Dr. U. DeBoni Dr. M. Moscovitch
Research Fellow	Dr. A. Dumbrille-Ross
Research Students	Mr. D. Grigoriadis Mr. H. Niznik Ms. W. Taylor

University of Western Ontario, London

Research Scholar	Dr. C. Gibson

Clarke Institute of Psychiatry, Toronto

Research Fellow	Dr. R. Cooke

Hospital for Sick Children, Toronto

Research Associate	Dr. M. Dennis
Research Scholar	Dr. M. Lovett
Clinical Research and Development Scientist	Dr. W. Sherwood

Toronto General Hospital

Research Fellow	Dr. B. Toner

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365 Bloor Street East
Suite 1708
Toronto, Ontario
M4W 3L4

Receipts will be issued for income tax purposes.